

May 27, 1997

Matthew Moran, Site Project Manager
State of Vermont
Agency of Natural Resources
Dept. of Environmental Conservation
Waste Management Division
103 S. Main St. / West Office
Waterbury, VT 05671-0404

SMAC
May 29 10 10 AM '97

WASTE MANAGEMENT
DIVISION

RE: SMS Site #96-1979, 86 Center St. Rutland

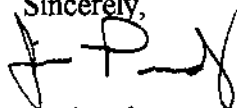
Dear Matt:

Enclosed for your review is (1) copy of the Initial Site Investigation, Report No. 2. for the Kupferer & Martin property located at 86 Center Street in Rutland, Vermont. This report has been prepared according to Tasks III. and IV. of the approved work plan dated 8/26/96.

The results of the ground water sampling and analysis confirm that the contaminated soils from the area of the 1000 gal., #2 fuel oil UST have been adequately removed and that minor residual contamination of soil and ground water exists only within the immediate area of the tank excavation. This residual contamination is not posing a significant threat to human health or the environment at the site and, accordingly, it is my opinion that the site should be considered for closure according to the SMAC Classification Procedure Guidelines.

Please call me at 483-6635 if you have any questions regarding this information. Thanks.

Sincerely,



Jim Purdy
Hydrogeologist

cc G. Kupferer, T. Martin
J. Kelley, SEI
1A2.17
enc.



telephone
802 483-6635

Phase (Check One)	Type (Check One)
<input type="checkbox"/> Initial Site Investigation	<input type="checkbox"/> Work Scope
<input type="checkbox"/> Corrective Action Feasibility Investigation	<input type="checkbox"/> Technical Report
<input type="checkbox"/> Corrective Action Plan	<input type="checkbox"/> PCF Reimbursement Request
<input type="checkbox"/> Corrective Action Summary Report	<input type="checkbox"/> General Correspondence
<input type="checkbox"/> Operations & Monitoring Report	

INITIAL SITE INVESTIGATION

REPORT No. 2

KUPFERER & MARTIN PROPERTY
86 CENTER STREET
RUTLAND, VERMONT

SMS SITE #96-1979

A FACILITY OWNED BY:
GARY KUPFERER & TOM MARTIN.
RUTLAND, VERMONT
(802) 773-9109
CONTACT: GARY KUPFERER

PREPARED BY:
GEOMAPPING ASSOCIATES LTD.
RR 1, BOX 264
PITTSFORD, VERMONT
(802) 483-6635
CONTACT: JIM PURDY

MAY 23, 1997



telephone
802 483-6635

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LOCATION MAP 86 CENTER STREET PROPERTY

SCALE: 1 : 24000
FROM USGS 7.5 MIN. "RUTLAND" QUADRANGLE

I. EXECUTIVE SUMMARY

1

The results of the first phase of the Initial Site Investigation of the Kupferer & Martin Property at 86 Center Street in Rutland, Vermont have been previously submitted to the Sites Management Section by report dated 7/25/96. The site investigation was implemented 5/29/96 by Geomapping Associates Ltd. and Stone Environmental, Inc. subsequent to removal of a 1000 gallon #2 heating fuel oil underground storage tank from the property on 4/29/96. Fuel oil contaminated soils were identified within the tank excavation at the time of removal by the tank removal contractor indicating that a release of fuel oil had occurred at the tank location. Contaminated soils were stockpiled on-site and subsequently removed for thermal treatment at the ESMI of NY facility on 8/13/96. Ground Water Sampling and analysis from the area of the tank excavation indicated the presence of the compounds benzene and xylene in ground water at concentrations at or above the Vermont Ground Water Enforcement Standards. In consideration of the apparent ground water contamination on-site as described above, the Sites Management Section has requested additional ground water sampling and analysis to:

- determine the full extent of the ground water contamination on-site,
- to determine whether ground water contamination extends beyond the property boundaries, and
- to determine if there is a need for site corrective action.

The second phase of the Initial Site Investigation has involved installation of (3) ground water monitoring wells both within the tank excavation and in a downgradient direction from the tank excavation. Due to the fact that the soils underlying the subject area are saturated with shallow ground water on a seasonal basis, ground water sampling has been performed during spring thaw conditions and the resulting period of seasonal high ground water levels.

Ground water levels were recorded twice during the month of April to determine the period of peak ground water saturation and to determine the direction of ground water flow in the subject area.

Ground water samples were collected from the (3) monitor wells on 4/18/97. The samples were shipped to ITS Environmental Laboratory in Colchester, Vermont for analysis of volatile organic compounds by EPA Method 8020 and for total petroleum hydrocarbons by EPA Method 8100.

The results of the ground water sampling phase of the initial site investigation indicate that:

- ground water in the immediate area of the tank excavation contains concentrations of benzene and naphthalene above the Vermont Ground Water Enforcement Standards,
- ground water quality compliance points have been established on the property as indicated by sampling at points 30 Ft. and 60 Ft. downgradient from the tank grave, and
- there are no potential receptors at risk as a result of the limited soil and ground water contamination present on the 86 Center St. property.

Based on the results of the Initial Site Investigation, Geomapping Associates Ltd. recommends that the Kupferer & Martin property at 86 Center St. be considered for closure according to the Site Management Activities Completed (SMAC) Classification Procedure Guidelines, dated 12/13/93.

II. SITE INFORMATION

2

Property Location - 86 Center Street
Rutland, Vermont

Landowners - Gary Kupferer, Thomas Martin

Contact Person - Gary Kupferer Esq.
Chapman & Kupferer Ltd.
PO Box 807
Rutland, VT 05702-0807

(802)773-9109

Tank Removal Contractor - J.E. Drumm Construction Co.
Dahlgren Rd.
RD #1, Box 421
Valatie, NY 12184

(518)758-9739

Site Investigation Consultants - Jim Purdy, Hydrogeologist
Geomapping Associates Ltd.
RR 1, Box 264
Pittsford, VT 05763

(802)483-6635

Jeff Kelley, Project Geoscientist
Stone Environmental Inc.
58 East State Street
Montpelier, VT 05602

(802)229-4541

II. SITE HISTORY

3

The site history of the Kupferer & Martin property at 86 Center Street has been previously outlined in the Initial Site Investigation report dated 7/25/96. Renovation of the three story brick structure located on the property is in progress. The gymnasium wing of the building was demolished and debris removed from the property prior to the time of the field sampling in April 1997.

Additional research has been performed to determine whether or not there has been any history of gasoline storage on the property. Henry Brislin, Assistant Attorney for the City of Rutland has interviewed employees from the Rutland Recreation Department (City of Rutland, previous landowner) to determine the status of the property in regard to gasoline storage on-site. Maintenance employees from the Rutland Recreation Dept. have indicated that they have no knowledge of gasoline storage on the property (see letter attached in appendix).

III. FIELD DATA

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Site Investigation Procedures

The continuation of the site investigation field work has involved the following procedures:

- 1) Soil Boring / Monitor Well Installation - A series of (3) monitor wells were installed on the 86 Center St. property by Adams Engineering, Drilling Contractor, Underhill, Vermont. The borings for these wells were installed with a vibratory drilling rig. Monitor wells were installed in the tank excavation, 30 Ft. downgradient from the tank excavation, and 60 Ft. downgradient of the tank excavation. Continuous soil samples were obtained from each monitor well boring. Soil samples were encased in poly tubing within sampler and remained encased until samples were bagged for field screening. The drilling tools were decontaminated by steam cleaning prior to drilling the individual stations. A Monitor Well Log was recorded for each boring indicating soil texture, consistence, color, presence of contamination, depth to ground water, depth to refusal, and monitor well construction. Monitor wells were developed prior to sampling using a peristaltic pump and dedicated polyethylene tubing.
- 2) Field Screening - Soils samples were obtained at 1 Ft. intervals from each monitor well boring for screening with a PID field unit. A MiniRae PID with a 10.6 eV lamp was used for headspace analysis of volatile organic compounds in the soils.
- 3) Ground Water Level Recording - Ground water levels were measured to the nearest 100th of a Ft. with an electric water level probe to determine depth and direction of ground water flow in the subject area. Water levels were recorded on 4/7/97 and on 4/18/97 just prior to sampling. The average static water level measurement has been calculated for each well. Ground water elevation isocontours have been plotted on the 1" = 40' Site Map.
- 4) Laboratory Analysis of Ground Water Samples - (1) round of ground water sampling was performed on site during the period of seasonal high ground water related to spring thaw conditions. Samples were collected for volatile organic compound analysis by EPA Method 8020 and for total petroleum hydrocarbon analysis by EPA Method 8100 (EPA Method 8310 actually performed by Lab). Samples were collected by means of dedicated teflon bailers. A minimum of (3) well volumes were purged from wells MW-2 and MW-3 prior to sampling. Due to poor recovery of well MW-1 during purging it was only possible to bail (2) well volumes prior to sampling this well. Samples were delivered to ITS Environmental Laboratory in Colchester, VT for analysis. (1) trip blank, (1) equipment blank were analyzed for sampling quality control.
- 5) Site Survey - Previously, horizontal and vertical control was established on the property by transit survey for accurate location of soil boring and UST excavation locations. The monitor wells have not been field located by transit survey. Approximate locations and interpolated collar elevations have been estimated from the initial field survey.

MONITOR WELL LOG

GEOMAPPING ASSOCIATES LTD.

SHEET 1 OF 1

MONITOR WELL NO. MW-1

PROPERTY: 86 CENTER ST., RUTLAND, VERMONT

COORDINATES: N E	WELL CONSTRUCTION: 7" MANWAY, 1.5" SOLID PVC RISER, 1.5" PVC SCREEN 0.010" SLOT, SAND PACK, GROUT SEAL	
COLLAR ELEV:	BORING DEPTH: 157"	WELL DEPTH: 150"
DATE: 12/17/96	AUGER SIZE / TYPE: 9" SOLID STEM	
DRILLER: ADAMS ENGINEERING, Underhill, VT	SAMPLER SIZE / TYPE: 5 FT. NQ SAMPLER, PE LINED 5 FT. BQ SAMPLER, PE LINED	
SITE LOCATION: +/- 60 FT. DOWNGRADIENT FROM UST EXCAVATION	SURFACE DESCRIPTION: LAWN AREA, 3 FT. FROM PAVED SIDEWALK	
GEOLOGIST: JEFF KELLEY, SEI (LOG J. PURDY)	LOG DATE: 12/17/96	

FOOTAGE	% SCALE	GRAPHIC LOG	SOIL DESCRIPTION	MOTTLING / SOIL MOISTURE	SAMPLE RUN / REC.	SAMPLE INTERVAL	PID READING (PPM)
			0 - 8" DARK BROWN SANDY LOAM TOP SOIL	DAMP	0 - 5' 36" Rec.	0 - 12"	1.0
12"			8 - 48" YELLOWISH BROWN, GRAVELLY, SANDY LOAM, NO VISIBLE CONTAMINATION, NO APPARENT HYDROCARBON ODOR	MOIST		12 - 24"	0.1
24"						24 - 36"	0.8
36"							
48"			48 - 157" LT. OLIVE BROWN STONY FINE SANDY LOAM, DOLOMITIC TILL, GRADES TO HIGHER CLAY CONTENT AT DEPTH, NO VISIBLE CONTAMINATION, NO APPARENT ODOR	DRY - MOIST W/ FEW FAINT MOTTLES	5 - 6.5' 18" Rec.	0 - 12"	0.8
60"						12 - 18"	0.8
72"							
84"			<u>MONITOR WELL CONSTRUCTION</u> 0 - 12" (7") MANWAY 12 - 16" BENTONITE SLURRY 4 - 30" SOLID 1.5" PVC RISER 30 - 150" WELL SCREEN, TIMCO HI FLO 0.010" SLOT 1.5" DIA. W/ POINT, SAND PACKED WELL NOT DEVELOPED VERY LOW YIELD		<div>SECOND RUN</div> 0 - 12.5' 48" Rec.	0 - 12"	1.9
96"						12 - 24"	1.1
108"						24 - 36"	0.9
120"			157" E.O.H.			36 - 48"	1.1
132"							
144"							
156"							
168"							

MONITOR WELL LOG

GEOMAPPING ASSOCIATES LTD.

SHEET 1 OF 1

MONITOR WELL NO. MW-2

PROPERTY: 86 CENTER ST., RUTLAND, VERMONT

COORDINATES: N E	WELL CONSTRUCTION: 7" MANWAY, 1.5" SOLID PVC RISER, 1.5" PVC SCREEN 0.010" SLOT, SAND PACK, GROUT SEAL	
COLLAR ELEV:	BORING DEPTH: 167"	WELL DEPTH: 157"
DATE: 12/17/96	AUGER SIZE / TYPE: 9" SOLID STEM	
DRILLER: ADAMS ENGINEERING, Underhill, VT	SAMPLER SIZE / TYPE: 5 FT. NO SAMPLER, PE LINED	
SITE LOCATION: +/- 30 FT. DOWNGRADIENT FROM UST EXCAVATION	SURFACE DESCRIPTION: LAWN AREA, REGRADED DURING BUILDING DEMOLITION	
GEOLOGIST: JEFF KELLEY, SEI (LOG J. PURDY)	LOG DATE: 12/17/96	

FOOTAGE	% SCALE	GRAPHIC LOG	SOIL DESCRIPTION	MOTTLING / SOIL MOISTURE	SAMPLE RUN / REC.	SAMPLE INTERVAL	PID READING (PPM)
0 - 12"			0 - 10" DARK GRAYISH BROWN SANDY LOAM TOPSOIL	MOIST	0 - 5" 48" Rec.	0 - 12"	0.4
12" - 24"			10 - 48" YELLOWISH BROWN, GRAVELLY, SANDY LOAM, NO VISIBLE CONTAMINATION, NO APPARENT HYDROCARBON ODOR	MOIST		12 - 24"	1.3
24" - 36"						24 - 36"	0.8
36" - 48"						36 - 48"	0.8
48" - 60"			48 - 167" OLIVE BROWN STONY FINE SANDY LOAM, NO VISIBLE CONTAMINATION, FAINT HYDROCARBON ODOR AT 120"	MOIST	5 - 10" 48" Rec.	0 - 12"	1.8
60" - 72"						12 - 24"	1.3
72" - 84"						24 - 36"	4.6
84" - 96"						36 - 48"	1.2
96" - 108"							
108" - 120"			167" REFUSAL ON ROCK 167" E.O.H.	SATURATED BELOW 120"	10 - 13.9" 36" Rec.	0 - 12"	0.9
120" - 132"						12 - 24"	0.9
132" - 144"						24 - 36"	0.4
144" - 156"							
156" - 168"							

MONITOR WELL LOG

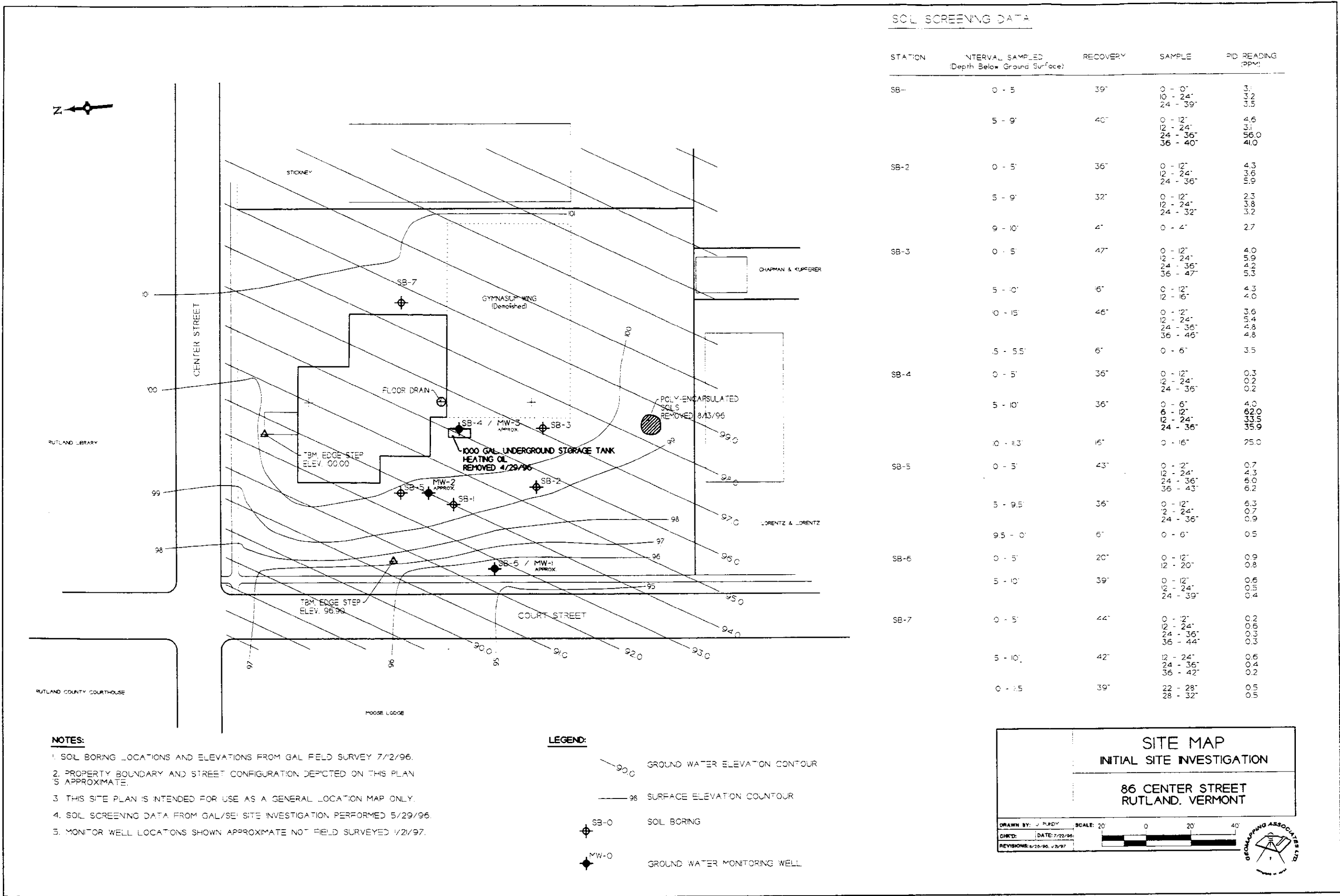
GEOMAPPING ASSOCIATES LTD.

SHEET 1 OF 1

MONITOR WELL NO. MW-3		PROPERTY: 86 CENTER ST., RUTLAND, VERMONT	
COORDINATES: N E		WELL CONSTRUCTION: 7" MANWAY, 1.5" SOLID PVC RISER, 1.5" PVC SCREEN 0.010" SLOT, SAND PACK, GROUT SEAL	
COLLAR ELEV:		BORING DEPTH: 148"	WELL DEPTH: 157"
DATE: 12/17/96		AUGER SIZE / TYPE: 9" SOLID STEM	
DRILLER: ADAMS ENGINEERING, Underhill, VT		SAMPLER SIZE / TYPE: 5 FT. NQ SAMPLER, PE LINED	
SITE LOCATION: UST EXCAVATION		SURFACE DESCRIPTION: REGRADED AREA ADJACENT TO DEMOLISHED BUILDING	
GEOLOGIST: JEFF KELLEY, SEI (LOG J. PURDY)		LOG DATE: 12/17/96	

FOOTAGE	% SCALE	GRAPHIC LOG	SOIL DESCRIPTION	MOTTLING / SOIL MOISTURE	SAMPLE RUN / REC.	SAMPLE INTERVAL	PID READING (PPM)
12"			0 - 60" COARSE SAND BACKFILL, BASE OF EXCAVATION AT +/- 60". NO VISIBLE CONTAMINATION, NO APPARENT HYDROCARBON ODOR	DAMP	0 - 5' 24" Rec.	0 - 12" 12 - 24"	1.1 0.7
24"							
36"							
48"							
60"				MOIST			
72"			60 - 148" OLIVE BROWN STONY FINE SANDY LOAM, FUEL OIL STAIN 60 - 88". SAMPLED SOILS CLEAN AND DRY BELOW 88"	WET	5 - 10' 40" Rec.	0 - 12" 12 - 24" 24 - 36" 36 - 40"	27.2 32.7 4.2 3.4
84"							
96"							
108"							
120"							
132"			<u>MONITOR WELL CONSTRUCTION</u> 0 - 12" (7") MANWAY 12 - 24" BENTONITE SLURRY 4 - 37" SOLID 1.5" PVC RISER 37 - 157" WELL SCREEN, TMCO HI FLO 0.010" SLOT 1.5" DIA. W/ POINT, SAND PACKED WELL DEVELOPED W/ PERISTALTIC PUMP LOW YIELD, LOW TURBIDITY		10 - 12.3' 22" Rec.	0 - 12" 12 - 22"	5.5 4.8
144"							
156"							
168"							
			148" REFUSAL ON ROCK 148" E.O.H. WELL POINT DRIVEN 9" BELOW BORING				

[illegible]



III. FIELD DATA

5

Comparative Ground Water Analyses Summary Table

MW-1 (60 Ft. Downgradient)

PARAMETER	4/18/97	VTGWES
Benzene	ND	5 ppb
Toluene	ND	2420 ppb
Ethylbenzene	ND	680 ppb
m+p-Xylene	ND	400 ppb total Xylenes
o-Xylene	ND	400 ppb total Xylenes
MTBE	ND	40 ppb

MW-2 (30 Ft. Downgradient)

PARAMETER	4/18/97	VTGWES
Benzene	3.2 ppb	5 ppb
Toluene	ND	2420 ppb
Ethylbenzene	9.6 ppb	680 ppb
m+p-Xylene	3.5 ppb	400 ppb total Xylenes
o-Xylene	4.3 ppb	400 ppb total Xylenes
MTBE	28 ppb	40 ppb

MW-3 / SB-4 (Tank Excavation)

PARAMETER	5/29/96	4/18/97	VTGWES
Benzene	22 ppb	12 ppb	5 ppb
Toluene	47 ppb	50 ppb	2420 ppb
Ethylbenzene	61 ppb	28 ppb	680 ppb
m+p-Xylene	240 ppb	78 ppb	400 ppb total Xylenes
o-Xylene	160 ppb	52 ppb	400 ppb total Xylenes
MTBE	37 ppb	2.8 ppb	40 ppb

Note: Trip Blank and Equipment Blank indicate all compounds ND

V. CONCLUSIONS / RECOMMENDATIONS

6

The second phase of the initial site investigation of the Kupferer & Martin property at 86 Center Street in Rutland indicates that:

- The release of #2 fuel oil on-site has resulted in a small, isolated area of soil and ground water contamination in the immediate area of the tank excavation. Fuel oil contamination of ground water has resulted in an elevated concentration of benzene and naphthalene within the area of the tank grave.
- Contamination of ground water on-site is being attenuated within a distance of 30 Ft. from the tank excavation as indicated by analysis of soil and ground water from monitor well MW-1 and MW-2. The results of the ground water sampling and analysis at MW-1 and MW-2 indicate compliance with the Vermont Ground Water Enforcement Standards in the area immediately downgradient from the tank excavation on the Kupferer & Martin Property. Two points of compliance have been established within the property boundaries which indicate that the potential receptors associated with the 86 Center Street property are not at risk as a result of the release of fuel oil contamination from the UST formerly located on the property and that no threat to human health or the environment exists on-site.
- The +/- 4 Cu. Yds. of stockpiled soils which had been poly-encapsulated on the property have been removed to a certified waste treatment facility for thermal treatment.
- MTBE has been detected at concentrations below the Vermont Ground Water Enforcement Standard in monitor well MW-2 and MW-3. Although the presence of this compound is anomalous with the previous storage of fuel oil on-site, research indicates that the previous landowner (City of Rutland) does not have any knowledge of gasoline storage on-site during the period of ownership from 1960 to 1996. The potential source of the low levels of MTBE detected in ground water is unknown and there is presently no indication that the source of this low level contamination is located on the 86 Center St. Property.

In consideration of the results of the Initial Site Investigation, the 86 Center Street property should be considered for closure pursuant to the SMAC Classification Procedure Guidelines.

VI. APPENDIX

Analytical Report

Geomapping Assoc. Ltd.
RR 1, Box 264
Pittsford, VT 05763

Date : 05/07/97
ETR Number : 64651
Project No.: 97000
No. Samples: 5
Arrived : 04/18/97

Attention : Jim Purdy

Page 1

Job:GAL Job No. I41133

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater. All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
329262	MW-1:04/18/97 (Water)	
8020	Aromatic Volatiles	C
8100	Ext. PNA's Water	C
8100	Polynuclear Aromatics	C
329263	MW-2:04/18/97 (Water)	
8020	Aromatic Volatiles	C
8100	Ext. PNA's Water	C
8100	Polynuclear Aromatics	C
329264	MW-3:04/18/97 (Water)	
8020	Aromatic Volatiles	C
8100	Ext. PNA's Water	C
8100	Polynuclear Aromatics	C
329265	Trip Blank:03/18/97 (Water)	
8020	Aromatic Volatiles	C
329266	Equip Blank:04/18/97 (Water)	
8020	Aromatic Volatiles	C

Comments/Notes

C = Procedure/analysis completed

< Last Page >

Submitted By : *Ran R Ching*

Aquatec Inc.



The following Qualifiers may be used when reporting any Organic Parameters analyzed by Gas Chromatography/Mass Spectrometry (GCMS). Any additional qualifiers used in the reports will be described in the case narrative. These flags are based on the EPA Contract Laboratory Program statement of work.

GC/MS Qualifiers

A = The reported Tentatively Identified Compound (TIC) is a suspected aldol-condensation product.

B = The reported analyte was detected in the associated method blank as well as the sample.

D = Compound is identified in an analysis which occurred at a dilution.

E = Compound quantitation is above the instrument's calibration range for this analysis.

J = Indicates an estimated quantitation value below reporting limit.

U = Compound was analyzed for but not detected.

X = The reported compound is a suspected laboratory contaminant.

Y = An additional qualifier which will be defined at the time of use by the data reviewer.

Z = The reported result is based on the combined responses from coeluting compounds.

FORM 1
8020-VOA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW_1

Lab Name: ITS ENVIRONMENTAL

Contract: 97000

Lab Code: INCHVT

Case No.: 97000

SAS No.:

SDG No.: 64651

Matrix: (soil/water) WATER

Lab Sample ID: 329262

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: 23AR970528-I081

Level: (low/med) LOW

Date Received: 04/18/97

% Moisture: not dec. _____

Date Analyzed: 04/23/97

GC Column: DB-VRX ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

1634-04-4-----Methyl tert-Butyl Ether	0.50	U
71-43-2-----Benzene	0.50	U
108-88-3-----Toluene	0.50	U
100-41-4-----Ethylbenzene	0.50	U
-----p/m-Xylene	1.0	U
95-47-6-----o-Xylene	0.50	U

Analytical Report

POLYNUCLEAR AROMATIC HYDROCARBONS
ANALYSIS DATA SHEET
Method 8310

SAMPLE ID.

MW-1

Client: Geomapping Assoc. Ltd.

Job: GAL

Job No.: 141133

Lab Name: ITS Environmental

Project No.: 97000

ETR No.: 64651

Phase Type: Water

Lab Sample ID: 329262

Phase Weight: 750 (mL)

Date Received: 04/18/97

Extraction: SepF

Date Extracted: 04/22/97

Silica Gel Clean-up: Y (Y/N)

Date Analyzed: 04/25/97

Dilution Factor: 15.0

CAS NO.	COMPOUND	CONCENTRATION mg/L	Q
91-20-3	Naphthalene	15	U
208-96-8	Acenaphthylene	15	U
83-32-9	Acenaphthene	15	U
86-73-7	Fluorene	2.0	U
85-01-8	Phenanthrene	2.1	
120-12-7	Anthracene	5.0	U
206-44-0	Fluoranthene	5.5	
129-00-0	Pyrene	4.9	
56-55-3	Benzo(a)anthracene	2.5	
218-01-9	Chrysene	3.0	
205-99-2	Benzo(b)fluoranthene	2.6	
207-08-0	Benzo(k)fluoranthene	1.2	
50-32-8	Benzo(a)pyrene	3.3	
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.9	
193-39-5	Indeno(1,2,3-cd)pyrene	1.5	

Key to the letter used to qualify the results of the analysis.

D - Diluted out.

U - The compound was analyzed for but not detected at or above the reporting limit.

The number is the method specified reporting limit for the compound.

J - The result is below the method specified reporting limit.

E - Result exceeds calibration range.

FORM 1
8020-VOA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW_2

Lab Name: ITS ENVIRONMENTAL

Contract: 97000

Lab Code: INCHVT

Case No.: 97000

SAS No.:

SDG No.: 64651

Matrix: (soil/water) WATER

Lab Sample ID: 329263

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: 24AR970857-I011

Level: (low/med) LOW

Date Received: 04/18/97

% Moisture: not dec. _____

Date Analyzed: 04/24/97

GC Column: DB-VRX ID: 0.45 (mm)

Dilution Factor: 2.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4-----	Methyl tert-Butyl Ether	28	
71-43-2-----	Benzene	3.2	
108-88-3-----	Toluene	1.0	U
100-41-4-----	Ethylbenzene	9.6	
-----	p/m-Xylene	3.5	
95-47-6-----	o-Xylene	4.3	



Intertek Testing Services Environmental Laboratories

55 South Park Drive
Colchester, VT 05446

Analytical Report

POLYNUCLEAR AROMATIC HYDROCARBONS ANALYSIS DATA SHEET Method 8310

SAMPLE ID.

MW-2

Client: Geomapping Assoc. Ltd.

Job: GAL

Job No.: 141133

Lab Name: ITS Environmental

Project No.: 97000

ETR No.: 64651

Phase Type: Water

Lab Sample ID: 329263

Phase Weight: 950 (mL)

Date Received: 04/18/97

Extraction: SepF

Date Extracted: 04/22/97

Silica Gel Clean-up: Y (Y/N)

Date Analyzed: 04/25/97

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION mg/L	Q
91-20-3	Naphthalene	5.2	
208-96-8	Acenaphthylene	1.5	
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.3	
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.1	
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-0	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U

Key to the letter used to qualify the results of the analysis.

D - Diluted out.

U - The compound was analyzed for but not detected at or above the reporting limit.

The number is the method specified reporting limit for the compound.

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FORM 1
8020-VOA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW 3

Lab Name: ITS ENVIRONMENTAL

Contract: 97000

Lab Code: INCHVT

Case No.: 97000

SAS No.:

SDG No.: 64651

Matrix: (soil/water) WATER

Lab Sample ID: 329264

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: 24AR970857-I021

Level: (low/med) LOW

Date Received: 04/18/97

% Moisture: not dec. _____

Date Analyzed: 04/24/97

GC Column: DB-VRX ID: 0.45 (mm)

Dilution Factor: 2.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

1634-04-4-----Methyl tert-Butyl Ether	2.8	
71-43-2-----Benzene	12	
108-88-3-----Toluene	50	
100-41-4-----Ethylbenzene	28	
-----p/m-Xylene	78	
95-47-6-----o-Xylene	52	



Intertek Testing Services Environmental Laboratories

55 South Park Drive
Colchester, VT 05446

Analytical Report

POLYNUCLEAR AROMATIC HYDROCARBONS ANALYSIS DATA SHEET Method 8310

SAMPLE ID.

MW-3

Client: Geomapping Assoc. Ltd.

Job: GAL

Job No.: 141133

Lab Name: ITS Environmental

Project No.: 97000

ETR No.: 64651

Phase Type: Water

Lab Sample ID: 329264

Phase Weight: 900 (mL)

Date Received: 04/18/97

Extraction: SepF

Date Extracted: 04/22/97

Silica Gel Clean-up: Y (Y/N)

Date Analyzed: 04/25/97

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION mg/L	Q
91-20-3	Naphthalene	73	
208-96-8	Acenaphthylene	28	
83-32-9	Acenaphthene	13	
86-73-7	Fluorene	15	
85-01-8	Phenanthrene	36	
120-12-7	Anthracene	2.0	
206-44-0	Fluoranthene	4.7	
129-00-0	Pyrene	2.8	
56-55-3	Benzo(a)anthracene	2.9	
218-01-9	Chrysene	2.5	
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-0	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U

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E - Result exceeds calibration range.

FORM 1
8020-VOA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TRIPBLANK

Lab Name: ITS ENVIRONMENTAL

Contract: 97000

Lab Code: INCHVT

Case No.: 97000

SAS No.:

SDG No.: 64651

Matrix: (soil/water) WATER

Lab Sample ID: 329265

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: 23AR970528-I091

Level: (low/med) LOW

Date Received: 04/18/97

% Moisture: not dec. _____

Date Analyzed: 04/24/97

GC Column: DB-VRX ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

1634-04-4-----Methyl tert-Butyl Ether	0.50	U
71-43-2-----Benzene	0.50	U
108-88-3-----Toluene	0.50	U
100-41-4-----Ethylbenzene	0.50	U
-----p/m-Xylene	1.0	U
95-47-6-----o-Xylene	0.50	U

FORM 1
8020-VOA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EQUIPBLANK

Lab Name: ITS ENVIRONMENTAL

Contract: 97000

Lab Code: INCHVT

Case No.: 97000

SAS No.:

SDG No.: 64651

Matrix: (soil/water) WATER

Lab Sample ID: 329266

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: 23AR970528-I101

Level: (low/med) LOW

Date Received: 04/18/97

% Moisture: not dec. _____

Date Analyzed: 04/24/97

GC Column: DB-VRX ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

1634-04-4-----	Methyl tert-Butyl Ether	0.50	U
71-43-2-----	Benzene	0.50	U
108-88-3-----	Toluene	0.50	U
100-41-4-----	Ethylbenzene	0.50	U
-----	p/m-Xylene	1.0	U
95-47-6-----	o-Xylene	0.50	U



Intertek Testing Services Environmental Laboratories

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Analytical Report

POLYNUCLEAR AROMATIC HYDROCARBONS ANALYSIS DATA SHEET Method 8310

SAMPLE ID.

EBLKL6

Client: Geomapping Assoc. Ltd.

Job: GAL

Job No.: I41133

Lab Name: ITS Environmental

Project No.: 97000

ETR No.: 64651

Phase Type: Water

Lab Sample ID: EBLKL6

Phase Weight: 1000 (mL)

Date Received:

Extraction: SepF

Date Extracted: 04/22/97

Silica Gel Clean-up: Y (Y/N)

Date Analyzed: 04/24/97

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION mg/L	Q
91-20-3	Naphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-0	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U

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Analytical Report

POLYNUCLEAR AROMATIC HYDROCARBONS ANALYSIS DATA SHEET Method 8310

SAMPLE ID.

L6LCS

Client: Geomapping Assoc. Ltd.

Job: GAL

Job No.: 141133

Lab Name: ITS Environmental

Project No.: 97000

ETR No.: 64651

Phase Type: Water

Lab Sample ID: L6LCS

Phase Weight: 1000 (mL)

Date Received:

Extraction: SepF

Date Extracted: 04/22/97

Silica Gel Clean-up: Y (Y/N)

Date Analyzed: 04/24/97

Dilution Factor: 1.0

CAS NO.	COMPOUND	% RECOVERY	Q
91-20-3	Naphthalene	69	
208-96-8	Acenaphthylene	97	
83-32-9	Acenaphthene	77	
86-73-7	Fluorene	79	
85-01-8	Phenanthrene	81	
120-12-7	Anthracene	77	
206-44-0	Fluoranthene	88	
129-00-0	Pyrene	86	
56-55-3	Benzo(a)anthracene	87	
218-01-9	Chrysene	90	
205-99-2	Benzo(b)fluoranthene	88	
207-08-0	Benzo(k)fluoranthene	88	
50-32-8	Benzo(a)pyrene	88	
53-70-3	Dibenz(a,h)anthracene	92	
191-24-2	Benzo(g,h,i)perylene	87	
193-39-5	Indeno(1,2,3-cd)pyrene	81	

Key to the letter used to qualify the results of the analysis.

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E - Result exceeds calibration range.



**CITY OF RUTLAND
LEGAL DEPARTMENT**

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August 28, 1996

Gary R. Kupferer, Esq.
32 Ross Street
West Rutland, VT 05777

Re: Lawrence Recreation Center

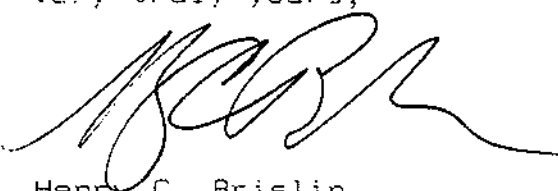
Dear Gary:

After we had received your report, I had passed it on to Ron Graves. I had spoken to Ron because there was the reference to the gasoline additive in the area of the fuel tank and we were equally confused.

Ron has spoken to Bill Reardon who is the institutional memory for what happened at that building. Bill does not remember at any time that there was a gasoline tank at that location.

This probably makes it worse rather than better for you because we're now even more confused, but I can only say that we have no knowledge that there was ever a gas tank there.

Very truly yours,



Henry C. Brislin,
Assistant City Attorney

HCB/d

STRAIGHT BILL OF LADING/NON-HAZARDOUS WASTE MANIFEST

1. Generator Information		Generator Name: Rupprecht & Martin Properties P.O. Box 807 Rutland, VT 05702		Site Address: 86 Center Street Rutland, VT 05702		No.	
2. Destination/Disposal Facility Information		Company Name: ES&T of NY Telephone No.: (518) 747-5500		Generator Telephone No.: (802) 773-9109			
3. Transporter Information		Transporter 1 Company Name: Born Wojtowick Inc. Telephone No.: (518) 371-0268 License Plate No.: 770175/ny		Transporter 2 Company Name:			
4. Material/Waste Description		Material Description/ Proper Shipping Name if DOT Hazardous Material		Hazard Class		Total Weight/Volume	
Containers							
No.	Type	HM					
a	01	DT	Waste Non RCRA Solid, non (12 fuel oil contaminated soil)	None	None	24000	
b							
c							
d							
5. Sub No.		Approval Nos.		Purchase Order No.		Required Placard(s)	
V0657		a. ERG 11NA c. d		45168		None	
10. Generator Certification: I hereby certify the above-named materials are properly classified, described, packaged, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.							
Generator Name: CATHERINE WILKINS		Generator Signature: <i>Catherine Wilkins</i>		Shipment Date: 8/13/96			
11. Acknowledgement of Receipt of Material - To be Completed by Signatories		Transporter 1 Driver Name (Print): DAVID W. BERTON		Signature: <i>David W. Berton</i>		Shipment Date: 8/13/96	
Transporter 2 Driver Name (Print):		Signature:		Shipment Date:			
12. Facility Receiving Wastes - Authorized Agent:		Signature: <i>John Faccaro</i>		Shipment Date:			
13. Emergency Telephone No.: (315) 471-0503		Contact Name: John Faccaro		Receipt Date: 8/13/96			
14. Discrepancy Indication Space to be Completed by the Disposal Facility.		Required for transportation of DOT Hazardous Material only.					

This form may not be used for wastes identified as hazardous under state or RCRA regulations.
 White: Retained by TSDF Green: Mailed by TSDF to Generator
 Environmental Products & Services, Inc., P.O. Box 315, Syracuse, NY 13209
 Canary: Mailed by TSDF to EPS Branch Pink: Retained by Final Transporter Gold: Retained by Generator